

66. RISK FACTORS INVOLVED IN THE OCCURRENCE OF ISCHEMIC STROKE

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Introduction: About 60% to 80% of all ischemic strokes can be attributed to increasing blood pressure, blood cholesterol, smoking, diabetes mellitus and atrial fibrillation [American Heart Association, June 29 2006; Potential New Risk Factors for Ischemic Stroke. What Is Their Potential? Graeme J. Hankey]. Hypertension is the single most important modifiable risk factor for ischemic stroke. Various lifestyle factors have been associated with increased stroke risk. These include obesity, physical inactivity, diet, and acute triggers such as emotional stress. Obesity has been associated with higher levels of blood pressure, blood glucose, and atherogenic serum lipids, which are independent risk factors for stroke.

Materials and Methods: Our study included 50 patients with hypertension and cognitive impairment, hospitalized in the cardiology department, Holy Trinity Hospital. We determined the association between MMSE score and incident CV events, adjusted for stroke, diabetes mellitus, atrial fibrillation, smoking and sedentary. We divided patients according to MMSE in 3 categories:

1. Lack of cognitive dysfunction: MMSE-24-30points;
2. Moderate cognitive dysfunction: MMSE-18-23points;
3. Severe cognitive dysfunction: 0-17points.

Maximum score for MMSE is 30 points.

Results obtained:

	MMSE= 29-27	MMSE= 26-24	MMSE <24
Stroke-11 patients	2(18.2%)	3(27.3%)	6(54.6%)
Diabetes mellitus-17 patients	4(23.5%)	6(35.3%)	7(41.2%)
Atria fibrillation-19 patients	6(31.6%)	6(31.6%)	7(36.8%)
Smoking-23 patients	8(34.8%)	10(43.5%)	5(21.7%)
Sedentary-20 patients	5(25%)	5(25%)	10(50%)

The table shows that severe cognitive deficit is characteristic of patients with stroke, sedentary, diabetes mellitus. Moderate cognitive dysfunction was characteristic for smoking patients, diabetes mellitus and atrial fibrillation.

Conclusion: Doctors have long called high blood pressure “the silent killer” because a person can have high blood pressure and never have any symptoms. Blood pressure is the most important risk factor in the occurrence of stroke. In our study we tried to demonstrate the relationship between high blood pressure and other risk factors involved in the occurrence stroke, and cognitive deficits caused by these.

Keywords: Stroke, hypertension, risk factors

67. CARDIOVASCULAR EVENTS AND COGNITIVE IMPAIRMENT

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Introduction: Cardiovascular disease is an important risk factor for cognitive impairment. It is also assumed that cognitive impairment may increase the risk of future cardiovascular events (CV). There is a growing interest in the relationship between cardiac and cognitive functions, both of which are often impaired in the elderly. Also significant cognitive impairment occurring after stroke and myocardial infarction.

Objectives: To determine the association between risks of cognitive impairment using scores on the Mini-Mental State Examination (MMSE) and CV events.

Methods: Our study included 50 patients (11 strokes, 16 myocardial infarctions and 23 congestive heart failures) hospitalized in the Cardiology Department of Holy Trinity Hospital. We divided patients according to MMSE in 3 categories:

1. Lack of cognitive dysfunction: MMSE-24-30points;
2. Moderate cognitive dysfunction: MMSE-18-23 points;
3. Severe cognitive dysfunction: MMSE-0-17 points.

Maximum score for MMSE is 30 points.

Results obtained:

MMSE	Myocardial infarction	Stroke	Congestive heart failure
Lack of cognitive dysfunction	7 patients (43.75%)	2 patients (18.2%)	13 patients (50%)
Moderate cognitive dysfunction	7 patients (43.75%)	3 patients (27.3%)	6 patients (23.1%)
Severe cognitive dysfunction	2 patients (12.5%)	6 patients (54.6%)	4 patients (15.4%)

The table shows that severe cognitive deficit is characteristic for patients with stroke and congestive heart failure. Moderate cognitive dysfunction was characteristic for patients with myocardial infarction and stroke.

	Stroke	Myocardial infarction	Congestive heart failure
Orientation(time)	1 (9.1%)	1 (6.25%)	2 (8.7%)
Orientation (place)	2 (18.2)	2 (12.5%)	2 (8.7%)
Registration	1 (9.1%)	1 (6.25%)	3 (13.1%)
Attention and calculation	2 (18.2)	2 (12.5%)	2 (8.7%)
Recall	0	3 (18.75%)	2 (8.7%)
Naming and repetition	1 (9.1%)		2 (8.7%)
Comprehension	1 (9.1%)	3 (18.75%)	2 (8.7%)
Reading	1 (9.1%)	1 (6.25%)	2 (8.7%)
Writing	1 (9.1%)	1 (6.25%)	3 (13.1%)
Copying	1 (9.1%)	1 (6.25%)	3 (13.1%)

MMSE Scale is an useful tool in detecting cognitive deficit as areas for patients with stroke, while the most characteristic are impairment of orientation (place), attention and calculation. For patients with myocardial infarction the most characteristic are impairment of recall and comprehension, for patients with congestive heart failure the most characteristic are impairment of registration, writing and copying.

Discussion: We found that baseline MMSE had the strongest association with stroke. Previous studies have shown that a prior history of clinical stroke is a much stronger predictor of recurrent stroke than myocardial infarction and congestive heart failure.

Conclusion: MMSE is detecting tool for cognitive impairment in predicting cardiovascular events.

Keywords: Cognitive impairment, stroke